El Salvador - Formal Technical Education

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Overview

Identification

COUNTRY
El Salvador

EVALUATION TITLE
Formal Technical Education

EVALUATION TYPE
Independent Impact Evaluation

ID NUMBER
DDI-MCC-SLV-MPR-FEDFINAL-2014-v01

Version

VERSION DESCRIPTION
- v01: Edited, anonymous dataset for public distribution.

Overview

ABSTRACT
With a budget of nearly $20 million, the Formal Technical Education Sub-Activity was designed to strengthen technical and vocational educational institutions in the Northern Zone of El Salvador. By improving schools and offering scholarships, the sub-activity financed efforts to increase youths' access to high-quality technical education in the region, thus increasing their achievement levels, secondary (and post-secondary) school graduation rates, and prospects for gainful employment. By 2012, the Formal Technical Education Sub-Activity was scheduled to invest $3.8 million in scholarships for students enrolled in secondary and post-secondary technical schools in the Northern Zone. According to preliminary budgets, the sub-activity would also provide $9 million to improve 20 technical secondary schools in the Northern Zone with infrastructure investments and additional teacher training programs. In addition, the sub-activity was scheduled to invest $7 million to strengthen ITCHA, an existing post-secondary institute in the Northern Zone.

In conducting the evaluation of the Formal Technical Education Sub-Activity-which includes secondary and post-secondary school improvements and scholarships-Mathematica will address the following research questions regarding Sub-Activity investments from 2009 to 2012:

1.Program design/implementation. How were the secondary school strengthening and scholarship programs, and the ITCHA strengthening program designed and implemented? Did implementation meet original targets and expectations? Why or why not?

2.Description of participants. What are the characteristics (age, gender, initial household income, etc.) of scholarship recipients? What are the basic characteristics of secondary school and ITCHA students?

3.Impact/Results. What is the impact of FOMILENIO's strengthening secondary school program on students' education and labor market outcomes, including secondary school enrollment, grade completion, graduation, and further education, employment, and income? What is the impact of the offer of scholarships in some programs within strengthened schools on student educational and labor outcomes? Did ITCHA graduates obtain jobs and experience increased income following graduation? Did ITCHA students who graduated from secondary school MEGATEC programs have better academic and labor market outcomes than students who did not attend secondary school MEGATEC programs?

4.Impacts/Results by key target subgroups. Were impacts/results different for girls versus boys? What types of participants experienced positive impacts?

5.Explanation for impact findings and results. What was the ex-post statistical power, and can this explain the lack of impacts (in cases where no impacts are found)? What aspects of implementation could explain the impacts/results? If impacts/results were different for girls versus boys, why?

6.Sustainability. Are secondary school improvements and scholarships being maintained? Are ITCHA improvements being maintained? Are they likely to be maintained in the medium to long term?

To answer all research questions regarding the design, implementation, and sustainability of the strengthening efforts and scholarships (Topics 1, 2, 5, and 6), Matheatica will use a mixed-methods evaluation design that uses qualitative and quantitative methods (see Table III.1). With this approach, researchers will use qualitative methods-namely, qualitative interview data and programmatic reports-to help understand processes and activities, provide information on setting or context, and communicate the perspectives and experiences of key participants through direct quotes. In addition, Mathematica will use quantitative information on program outputs and costs, participant characteristics, and budget outlays to summarize the intervention, describe its participants, and analyze the sustainability of its original investments.

To answer research questions regarding impacts and results (3, 4, and 5), Mathematica will use a variety of designs. To determine the impact of secondary school scholarships, researchers designed and implemented a random assignment design, by which some eligible applicants were randomly selected to receive scholarships. To determine the impact of secondary school strengthening investments, Mathematica designed and implemented a matched comparison group approach using propensity score methods, by which students at the 20 strengthened schools are compared to students at 20 similar non-strengthened schools. Finally, to measure key results of the ITCHA intervention-including graduation and employment rates-researchers used a mixed-methods approach that featured a follow-up survey of ITCHA students.

All impact and results analyses rely on in-person surveys, including panel surveys of scholarship applicants, cross-sectional baseline and follow-up surveys of secondary school students, and a follow-up survey of ITCHA students.

EVALUATION METHODOLOGY
Randomization, Propensity Score Matching, Pre-Post

UNITS OF ANALYSIS
Individuals, Schools

KIND OF DATA
Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Education, scholarships		
Income, property and investment/savings		
Gender		

KEYWORDS
Impact Evaluation, Secondary Education, Post-Secondary Education, Scholarships, Infrastructure, Teacher Training, Technical Education

Coverage

GEOGRAPHIC COVERAGE
The Northern Zone of El Salvador

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Mathematica Policy Research	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Review of Metadata
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MCC Compact and Program

COMPACT OR THRESHOLD
El Salvador Compact

PROGRAM
Formal Technical Education Sub-Activity With a budget of nearly $20 million, the Formal Technical Education Sub-Activity was designed to strengthen technical and vocational educational institutions in the Northern Zone of El Salvador. By improving schools and offering scholarships, the sub-activity financed efforts to increase youths' access to high-quality technical education in the region, thus increasing their achievement levels, secondary (and post-secondary) school graduation rates, and prospects for gainful employment. By 2012, the Formal Technical Education Sub-Activity was scheduled to invest $3.8 million in scholarships for students enrolled in secondary and post-secondary technical schools in the Northern Zone. According to preliminary budgets, the sub-activity would also provide $9 million to improve 20 technical secondary schools in the Northern Zone with infrastructure investments and additional teacher training programs. In addition, the sub-activity was scheduled to invest $7 million to strengthen ITCHA, an existing post-secondary institute in the Northern Zone.

MCC SECTOR
Education (Edu)

PROGRAM LOGIC
The sub-activity's range of investments-scholarships, school improvements, teacher training sessions, new technical programs, improvements at ITCHA, and PILAS-were intended to generate improved employment outcomes among secondary and post-secondary school students. Secondary school scholarships, infrastructure improvements, and new technical degrees would motivate students to enroll in secondary school programs-particularly, technical programs. In addition, teacher training sessions would improve the quality of technical and general education in secondary schools, as well as students' achievement levels. Increased enrollment and better instruction would generate a higher number of secondary school graduates, as well as increased employment and income among graduates. Furthermore, post-secondary scholarships and ITCHA improvements would increase enrollment and completion of post-secondary technical education. Potential employment assistance from PILAS could also support recent secondary school and post-secondary school graduates in finding salaried employment or starting their own business. The sub-activity's investments were strongly linked in their areas of influence, target populations, and objectives. In particular, the scholarship and secondary schools strengthening interventions had strong linkages, as scholarships would be offered only to students in the 20 secondary schools that were strengthened. For this reason, stakeholders considered the scholarship program to be one component of the secondary school strengthening activity, which also included infrastructure improvements and teacher training investments. Strengthened secondary schools also served as a complement to the ITCHA intervention, as these improved schools would supply ITCHA (and other facilities in and near the Northern Zone) with students who were better prepared for post-secondary education. The sub-activity's secondary school improvements and scholarships began general implementation in 2010 and occurred concurrently with post-secondary investments at ITCHA. Therefore, the first cohort of students who could benefit from the full set of sub-activity investments-including strengthened secondary schools and ITCHA facilities, new MEGATEC degree programs at the secondary and post-secondary level, and secondary and post-secondary scholarships-is the cohort who entered secondary school in early 2010 and completed a superior degree at ITCHA in late 2013, more than one year after the conclusion of the compact period in 2012.

PROGRAM PARTICIPANTS

Secondary and post-secondary school students

Sampling

No content available

Questionnaires

Overview

This study features student-level questionnaires. Two primary versions of these questionnaires were developed--one for secondary school students and one for post-secondary school students. The secondary school questionnaire was administered to students who applied for scholarships and students who attended the 40 secondary schools in the secondary school evaluation. The post-secondary school questionnaire was administered to students of the Chalatenango Technical Institute (ITCHA). Both questionnaires asked students (or former students) about enrollment, academic performance, progression and graduation, as well as their employment and income in the previous 12 months.

Data Collection

Data Collection Dates

Start	End	Cycle
2009-10-01	2009-12-18	Secondary Schools 1
2013-10-07	2013-11-06	Secondary Schools 2
2011-07-14	2011-08-08	Scholarships 1
2012-06-15	2012-07-23	Scholarships 2
2013-11-11	2013-12-13	ITCHA 1

Data Collection Notes

Secondary schools 1 surveys were administered by CIDE; all other surveys were administered by DIGESTYC.

Questionnaires

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Data Collectors

Name	Abbreviation	Affiliation
International Consortium for Educational Development	CIDE	
Direccion General de Estadistica y Censo	DIGESTYC	Ministry of Economy, El Salvador

Data Processing

No content available

Data Appraisal

No content available